

How to Institutionalize Space Superiority in the United States Air Force

A Commandant's Professional Studies Paper
presented to the faculty of the United States Air Force Air War College

By

Richard M. Patenaude, Lt Col, USAF

Maxwell AFB, Alabama
2001

Distribution A: Approved for public release; distribution is unlimited

Disclaimer

The views expressed in this academic research paper are those of the author(s) and do not reflect the official policy or position of the US government or the Department of Defense. In accordance with Air Force Instruction 51-303, it is not copyrighted, but is the property of the United States government.

The Air Force talks about space superiority, but as a whole it has not institutionalized space superiority as it has other mission areas such as air superiority. Air superiority is at the heart of what the Air Force does. Everyday airmen go to work and think about, plan for, wargame, and practice air superiority. It is not assumed; it is won. It is woven into the fabric of the Air Force and understood as essential at every level. That is what the Air Force must do to institutionalize space superiority—weave it into the fabric of the Air Force and make it a top priority mission to be won rather than assumed.

Institutionalizing space superiority would require making space superiority an established, clearly identifiable mission with formal, discernible organizational structures that standardize practices and approaches, and codify officially sanctioned beliefs. The result of institutionalization would be to take space superiority and make it a mainstream mission of the Air Force. All air professionals should understand the basic concepts and requirements, and why space superiority is important. All space professionals should do their everyday jobs with the knowledge that space superiority is essential, that it must be taken in to account at every level, at every step, and that without it, all other space missions are vulnerable.

The Air Force can institutionalize space superiority in five steps designed to create operational Counterspace doctrine, emphasize the Counterspace mission area, create an identifiable and interactive space superiority community, inculcate space superiority mission concepts, and create a global Counterspace command structure.

The terms space superiority, Space Control, and Counterspace are often used interchangeably and the exact meanings sometimes vary depending on the source. Space

superiority is the “degree of control necessary to employ, maneuver, and engage space forces while denying the same capability to an adversary.”¹ It is the space equivalent to air superiority. Space Control is “the means by which space superiority is gained and maintained.”² Space superiority describes a desired objective; Space Control refers to the “means” employed to achieve that objective. Counterspace is the mission carried out to achieve space superiority. It, like counterair, is one of the seventeen basic air and space power functions (See Figure 1). Counterspace is divided into two parts: Offensive Counterspace and Defensive Counterspace.³ This paper will use the term space superiority in preference to space control, except when discussing the Space Control mission area recognized by Air Force Space Command, or when used in direct quotes.

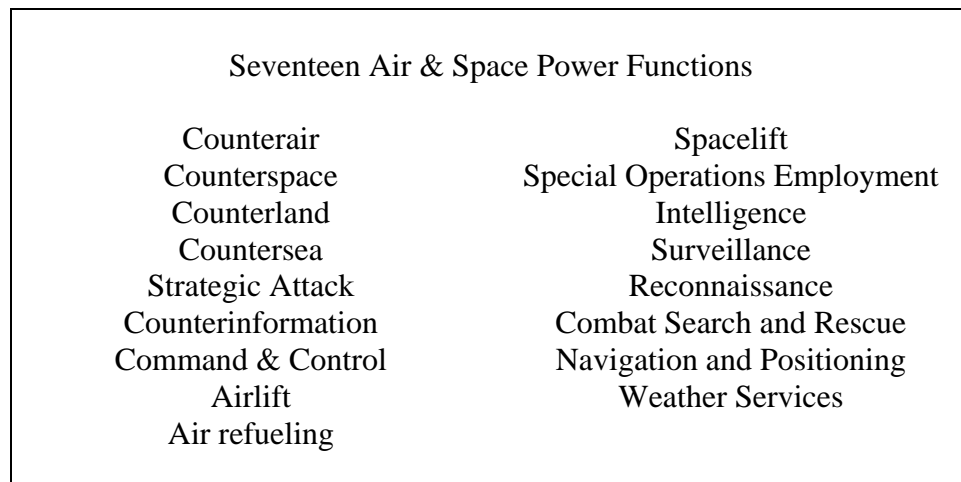


Figure 1-1 Air & Space Power Functions⁴

Step One: Develop Operational Counterspace Doctrine

Sound, unclassified operational doctrine available to all Air Force planners is the first step toward institutionalizing space superiority in the Air Force. According to Air

¹ Department of the Air Force, Air Force Doctrine Document 1, Air Force Basic Doctrine, (Washington D.C.: Government Printing Office, 1997), 857.

² Department of the Air Force, Air Force Doctrine Document 2-2, Space Operations, (Washington D.C.: Government Printing Office, 1997), 8.

³ Ibid.

Force basic doctrine, “strategy describes how a job will be done [and] doctrine describes how a job should be done.”⁵ With it, planners can incorporate Counterspace activities into campaign level strategy from the beginning. Without it, there is no operational guidance on how one should obtain space superiority.

Interestingly, the absence of Counterspace doctrine has not stopped Counterspace activities from taking place. The most obvious examples are the passive defensive measures incorporated into satellites and the procurement of mobile ground stations. Less well known are the United States’ efforts at shutter control. During the Gulf War, the coalition halted the flow of imagery from France’s SPOT satellite and denied Iraq the use of normally obtainable commercial space products. Today, in Operation ENDURING FREEDOM the United States bought exclusive rights to all imagery taken of and near Afghanistan from IKONOS, a space imaging satellite, owned by Space Imaging of Denver, Colorado.⁶ Space warriors are already out performing existing doctrine as shutter control, a non-lethal Offensive Counterspace operation, is not mentioned anywhere

Doctrine is defined as the “officially sanctioned beliefs and warfighting principles that describe and guide the proper use of air and space forces in military operations”⁷ and *Air Force Doctrine Document 2-2, Space Operations* constitutes the entirety of current space doctrine. It expands upon rudimentary beliefs and principles found in basic doctrine and provides specific principles and doctrine applicable to all space operations, but is inadequate for space superiority planning. It is heavily weighted toward the Force

⁴ Dept of the AF, *Basic Doctrine*, 45.

⁵ *Ibid.*, 4.

⁶ James R. Asler, Ed., “Washington Outlook,” *Aviation Week and Space Technology*, (22 Oct 01): 25.

⁷ Dept of the AF, *Basic Doctrine*, 1.

Enhancement mission and how space power can be brought to bear to assist the warfighter on land, at sea, and in the air. As to space superiority it defines the two types of Defensive Counterspace: active and passive, and defines the five major purposes of Offensive Counterspace operations: deception, disruption, denial, degradation, and destruction. It does not state how the Air Force should accomplish space superiority. A revised and expanded draft is currently in coordination. In the area of space superiority and Counterspace it adds some guidance, but not enough. Most of the added doctrine deals with command and control of space assets, planning, and space training and education. There is still no solid direction on how one should plan to achieve space superiority.

At the tactical level there is plenty of doctrine—all of it classified. The information deals with specific space systems and what can be done to assure operability in certain threat environments. There are two problems. First, this is not operational doctrine, the kind used to write campaign plans. Commanders need answers to operational questions such as: When is it better to deny versus disrupt or destroy versus degrade, or, what space system segment is better to target when trying to degrade, deny, disrupt, etc.? The second problem is the classification. It ranges from Secret to highly sensitive, limited access programs. This restrictive nature of space operations hinders the institutionalization of space superiority.

Air doctrine on the other hand, such as *Air Force Doctrine Document 2-1, Air Warfare* has a distinctly warfighting bent and includes in good detail such specifics as planning joint air operations, target development, and air tasking order development. More importantly, additional operational level doctrine is codified in separate doctrinal

publications, subordinate to *Air Warfare*, such as *Counterland Operations*, *Countersea Operations*, and most relevant to the matter at hand, *Counterair Operations*. Counterair is the mission carried out to achieve air superiority, just as Counterspace is the mission carried out to achieve space superiority. *Counterair Operations*, gives authoritative guidance on how one should achieve air superiority. It details command and control structures, target categories and types, and offensive and defensive missions. After reading the document, one has a good idea of the types of targets, specific planning factors to be considered, the kinds of forces available, and how to employ them to carry out counterair operations.

An excellent example of how to nurture a new and distinct mission such as Counterspace and grow it into officially sanctioned beliefs, is the rise of air power and air power doctrine in the U.S. Army between WWI and WWII. In 1920 the War Department authorized the start of eleven air service schools, including what became the Air Corps Training School (ACTS). One of ACTS's missions was "to originate sound tactical doctrine for the air service as a whole."⁸ Air power had a focal point for the collection and development of air power theory and doctrine isolated from regular Army influences. Over the next twenty years airmen developed air power principles of employment, formalized theory into doctrine, and sought to identify particular target sets. They laid the foundation for aircraft development and the strategic bombing campaigns of WWII, and created a cadre of air power professionals. It was an air power "think tank."

To begin the process of developing Counterspace operational doctrine the Air Force needs a focal point, a responsible agency that can study innovative ideas and

mature them into operable principles that can be tested and wargamed. Such a Counterspace “think tank” would have the authority to use existing theories and ideas, develop new ones, mature them, and make them “officially sanctioned beliefs.” To do so it should have the following attributes:

1. A clear mission to originate sound operational doctrine for Counterspace operations.
2. Senior leadership attention capable of getting buy-in on “school solutions.”
3. A program to teach a cadre of Counterspace professionals.
4. Creative personnel from diverse disciplines. Personnel must be knowledgeable on all three segments of space power: space, ground, and communications links, and should include operators, engineers, communicators, and information warfare experts at a minimum. Since, according to existing doctrine, land, sea, air, space, information, and special operations forces will carry out the mission, it should have warfighters from each of these disciplines. All must be well read on theory and doctrine, and willing to push the vanguard of ideas.

Operational Counterspace doctrine on how one should achieve space superiority is the most important step to institutionalizing space superiority in the Air Force. As Major General David MacGhee, Commander, Air Force Doctrine Center said, doctrine helps establish a service identity and a service culture.⁹ In this case, Counterspace doctrine will help establish a Counterspace mission identity and a space superiority culture.

⁸ Lt Col Peter R. Faber, “Interwar US Army Aviation and the Air Corps tactical School: Incubators of American Airpower,” in The Paths of Heaven: The Evolution of Air Power Theory, ed. Col. Phillip S. Melinger, (Maxwell Air Force Base, Alabama: Air University press, 1997), 186-187, 213.

Step Two: Realign Air Force Space Missions Areas

In order to focus on Counterspace and give it the level attention demanded by national strategy and other forward-looking space reports, it must be pulled from among the thirteen sub-mission areas identified by Air Force Space Command and elevated to one of the four primary space power missions. Currently, Counterspace is tucked away, practically hidden from view to all but the space community. Just as air warfare is distinct and separate from air mobility, combat support, and information operations; so too must Counterspace be separate and distinct as a space mission of prominence.

The current primary space missions are Force Enhancement, Space Support, Force Applications, and Space Control. The Air Force and the military as a whole put principal emphasis on Force Enhancement. Of the seventeen air and space power functions, Force Enhancement either encompasses or significantly contributes to every one. When the military talks about space power, they mean Force Enhancement. Interestingly, it is the tremendous value and reliance placed on Force Enhancement missions that drives the demand for space superiority. Space Support is also a preeminent space mission and on a par, precedence-wise, with Force Enhancement. Without continuous launch services, space power would diminish. A delay in or shut down of satellite operations would have an immediate impact—orbits would degrade, as would performance. The Force Applications mission contains the backbone of nuclear deterrence, the ICBM force. Its precedence equates to the influence of United States Strategic Command. That leaves Space Control at the bottom, by default. If the Air

⁹ Major General David MacGhee, USAF, “Toward Aerospace Diplomacy,” Presentation to the USAF Air War College, Maxwell Air Force Base, 5 Nov 01, used by permission.

Force does nothing right now to ensure space superiority, there is little immediate impact to space power.

Space Mission Area	Sub-Missions
Force Enhancement	Space-based Navigation Satellite Communications Environmental Monitoring Surveillance and Threat Warning Command and Control Information Operations
Space Support	Launch Operations Satellite Operations
Force Applications	Nuclear strike capabilities Conventional strike capabilities
Space Control	Space Surveillance Counterspace National Missile Defense (NMD)

Figure 2. Current Space Mission and Sub-Mission Areas

Furthermore, as currently designed, Counterspace is in competition with the two other sub-missions included under Space Control: Space Surveillance and National Missile Defense. Space Surveillance (finding, identifying, cataloging, and tracking all objects orbiting the earth) is considered absolutely essential as the first step to controlling space. National Missile Defense has the attention of the President, Congress, and the Nation. Counterspace, on the other hand, has no clear identity or advocate and is at the bottom again. The five changes to mission alignment discussed below would raise Counterspace to a level of prominence and help institutionalize space superiority. The new mission areas would look like figure 3 below (changes italicized).

1. Move Space Surveillance to Force Enhancement. It provides space situational awareness. The information is used for space reconnaissance and directly supports the Counterspace mission just as navigation, weather, communication,

and early warning systems support counterair, countersea, and counterland missions.

2. Move National Missile Defense to Force Applications. Stopping offensive weapons from passing through the space medium is not space superiority. The Air Force claimed air superiority in the gulf war yet never successfully prevented Iraq's Scud missiles from flying through the air. (This move would also help integrate offensive and defensive deterrent forces. Mission precedence, non-interference, and the sharing of resources, remain bothersome issues between United States Strategic Command's offensive capability and National Missile Defense.)
3. Elevate Counterspace to a primary mission area with two sub-mission areas: Offensive Counterspace and Defensive Counterspace. This would make Counterspace as visible as Force Enhancement, Space Support, and Force Application. Counterspace would be at a level where the whole Air Force could begin to understand the mission (and question what's being done about it).
4. Eliminate Space Control from the primary mission areas. There is no equal mission such as "air control" between counterair and air superiority and such a mission is not needed for space. (The term aerospace control refers to the control of the airspace over a battlefield and deconflicting field artillery and aircraft.)
5. Split the Surveillance and Threat Warning sub-mission area into Terrestrial Surveillance, and Threat Warning and Assessment. This would help clean up the Force Enhancement sub-missions following the addition of Space Surveillance.

Space Mission Area	Sub-Missions
Force Enhancement	Space-Based Navigation Satellite Communications Environmental Monitoring <i>Space Surveillance</i> <i>Terrestrial Surveillance</i> <i>Threat Warning and Assessment</i> Command and Control Information Operations
Space Support	Launch Operations Satellite Operations
Force Applications	Nuclear Strike Capabilities Conventional Strike Capabilities
<i>Counterspace</i>	<i>Offensive Counterspace</i> <i>Defensive Counterspace</i>

Figure 3. Realigned Space Mission Areas

The need to realign mission areas and produce increased visibility are borne out by a close look at the *Strategic Master Plan for FY02 and Beyond* promulgated by Air Force Space Command in February 2000. The plan includes bar charts that show the programs for each mission and sub-mission area. The charts show Space Control activities on par with those of Force Enhancement and Space Support, and well ahead of Force Applications.¹⁰ Under the proposed realignment, similar charts would reveal that Force Enhancement (30) nearly doubles the programs of Space Support (17) which nearly doubles the programs of Force Applications (9) which nearly doubles the programs of Counterspace (5). The realignment gives a much different portrayal of Air Force Space Command priorities. The importance of this discussion, however, isn't whether there is enough activity to support Counterspace, but to help demonstrate how the Space Control

¹⁰ Department of the Air Force, Air Force Space Command, Strategic Master Plan for FY02 and Beyond. (Peterson Air Force Base, Colorado, 2000), Executive Summary page 6 of 14.

mission area as currently defined can cloud visibility into what is being done for space superiority's primary mission area—Counterspace.

Step Three: Change Roles and Organizational Missions

Changes to Air Force Space Command roles and organizational missions are suggested in the near and long term. In the near term, changes should be made to support step one, doctrine development, and step two, mission realignment. The following five near-term changes promote Counterspace and space superiority. They increase visibility, reflect the proposed mission realignment, and nurture essential interplay between space superiority advocates.

1. Charge the Space Warfare Center's Space Operations School with developing operational Counterspace doctrine, change manpower allocations as necessary to ensure the required diversity, and populate positions through a competitive board selection process. In many ways the Space Operations School resembles the ACTS of early air power, it even refers to itself as the "Air Corp Tactics School of Space." They concentrate on training and education, future concept development, and theory and tactics development. Air Force Space Command should give the school a clear mandate, just as the Army charged the ACTS, to originate sound operational doctrine for Counterspace forces. The Space Operations School would be well supported by the 527th Space Aggressor Squadron, tasked to replicate adversary space capabilities, doctrine, and tactics; and the Air Force Space Battlelab, charged with identifying innovative space operations and logistics concepts and rapidly measuring their potential. The 527th and the Battlelab are both part of the Space Warfare Center.

2. Change the Operations Directorate's Space Control Mission Team Division to the Counterspace Division and stand up a Doctrine Working Group. The Division would be Command lead for Counterspace doctrine, write Concepts of Operations for planned Counterspace systems, and when Counterspace systems are fielded, support operational units with routine organize, train, and equip issues. The Doctrine Working Group would convene once or twice a year to link the Space Warfare Center to the Headquarters staff and the Space Analysis Center to ensure a smooth vetting process. The Space Surveillance and National Missile Defense activities currently under the Space Control Mission Team would move to the Force Enhancement Division and Force Applications Division, respectively.
3. Change the Requirements Directorate's Space Control Division to the Counterspace Requirements Division and stand up a Combat Space Board. This Division would advocate the Counterspace mission area and develop Counterspace requirements. The Combat Space Board would be similar to Air Combat Command's Combat Air Board. Air Combat Command uses the Combat Air Board to solicit and compile improvements to Counterair tactical and operational doctrine. Each space squadron would channel Counterspace ideas concerning its particular system through the wing to Air Force Space Command. Real world accidents, failures, and other experiences from the field that negatively impacted operational capability would be brought forward and explored as possible avenues to defend against (Defensive Counterspace) or exploit (Offensive Counterspace). The information would be channeled to the Space Warfare Center, and the acquisition and research communities as

appropriate. The current surveillance, defense, and space systems command and control work being done by the Space Control Division would be handed off to the Force Enhancement and Space Support Divisions.

4. Create a Space Superiority Mission Area Team in the Plans and Programs Directorate and stand up a Space Superiority Long-Range Planning Panel. The Mission Area Team would integrate Counterspace operations plans with the plans for contributing and supporting missions such as Space Surveillance and Launch Services. At this level a clear, overall picture of Air Force Space Command's ability to assure space superiority would emerge. The team would initiate the integrated planning process and be the Command focal point for ensuring an integral approach to space superiority. The Space Superiority Long Range Planning Panel would focus on future threats and requirements and ensure technologies are pursued today to support the needs of tomorrow.

The Air Force can implement the preceding four near-term recommendations quickly and progress satisfactorily for the next 5-10 years. For the longer term, say 10-20 years and beyond, the Air Force should again emulate the rise of air power in the Army. In 1926 when Congress passed the Air Corps Act, it separated out air power as a combat arm organizationally separate and distinct from the Signal Corps. The newly created Air Corps was placed on par, organizationally at least, with the other combat arms of infantry, artillery, and armor.¹¹ Space warfighting missions must eventually be separated from the space support missions and elevated to major command prominence. Air Force Space Command and the four realigned space missions areas should be divided between

¹¹ Col (Ret) John L. Frisbee, Makers of the United States Air Force, (Washington: Government Printing Office, 1996) 6.

a new Space Support Command (or, perhaps, Space Mobility Command) and a new Space Combat Command. This is in concert with the way the Air Force divided Strategic Air Command assets during the 1993 reorganization. The Air Force combined fighters, bombers and ICBMs into a warfighting Air Combat Command, and the tankers were combined with the airlifters into a single, supporting Air Mobility Command.*

Space Support Command would support the warfighting Commanders-in-Chief with Force Enhancement operations to both terrestrial and space forces and conduct the day-to-day Space Support operations. It would support other unified and major commands with communications, navigational aides, early warning, launch services, etc., much like Air Mobility Command supports unified and major commands with airlift and air refueling.

Space Combat Command would focus on warfighting missions. It would combine Counterspace forces, missile forces, and Space-based weapons. Its mission could be as simply stated as Air Combat Command's mission: to provide combat ready space forces for assigned missions. It would have a numbered air force for nuclear and conventional missiles and another for Counterspace and space-based forces. Space Combat Command would be a warfighting force provider similar to Air Combat Command.

These combined changes would assign responsibility for the doctrine to a space superiority "think tank" and provide the space community with an space superiority identity and culture. The space community would begin to emphasize space superiority

* ICBMs were later moved to Air Force Space Command in an effort to combine all activities conducted in the space realm, whether they be warfighting or support missions. This seems to fly in the face of the "air and space are one seamless continuum" school of thought, but that is a different paper.

and realize how their every day jobs impact the mission. With Air Force Space Command leading the way, the rest of the Air Force will follow.

Step Four: Inculcate the Global View of Space Superiority

Space power lessons and presentations should move away from “here are the latest toys” briefings intended to advertise new Force Enhancement capabilities. Force Enhancement is already institutionalized. Instead, lessons and presentations should emphasize the global considerations of space power and space superiority. The more warriors grapple with the importance of space superiority and the impact of Counterspace operations, the more demands they will place on the Air Force to think about, develop doctrine for, and fund programs in support of space superiority.

Space superiority is a global concern and cannot be assigned to any one theater. Satellites traverse the globe in a realm well beyond the terrestrial concerns of boundaries and sovereignty. They pass high overhead with great speed sensing or supporting each part of the world for a limited period of time. Ground stations too are widespread in order to maintain contact with the satellites at different segments of their orbits. Each space system segment can affect multiple theaters at the same time.

The global nature of space superiority makes it unique and quite different from air superiority. Air superiority is established and maintained as needed in specific areas of responsibility. Commanders ensure the freedom to operate air forces in assigned theaters and deny the same to the enemy. For the most part the commander’s area of responsibility has definable terrestrial limits. Space superiority for space-based assets is more akin to sea superiority as no nation can claim complete sovereignty over the oceans. A given naval task force can claim superiority only over its immediate area. Space-based

assets must ensure superiority over their immediate area, but that immediate area moves speedily, relative to the earth, along with the satellite.

With regard to the ground-based and link segments, the problem of space superiority is equally global, but more territorial in nature. Ground-based assets, whether mobile or fixed, are in a specific place at any one time. That physical place needs to be defended. Link segments can be attack from a wider area, but, a jammer must be within some effective distance of the signal it intends to jam and that area too can be plotted on terrestrial maps and defended. Laser blinding weapons on the other hand, can be placed anywhere on the planet where the target satellite comes into view. Enforcing space superiority requires a global perspective and approach, well outside the area of responsibility of one theater commander.

Global space assets also are used in multiple theaters at the same time. One theater commander may be experiencing a low threat to space superiority, while another commander may be experiencing a high threat. Yet both theaters can be impacted by the greater threat in one theater. Theater A commander, for instance, may want to disrupt specific space assets being used by the enemy, while Theater B commander is relying on those same assets to accomplish his mission. Thinking about space superiority requires a worldview, and air power professionals must be trained to think about space superiority in a global sense.

The basic complexities and interrelationships involved in achieving and maintaining space superiority must become second nature to all airmen. The Air Force should begin inculcating these concepts throughout the Service at all echelons. In so doing, warfighters will help institutionalize space superiority. Knowledgeable airmen

talking to knowledgeable airmen will create an atmosphere where space superiority is second nature and as obvious as air superiority.

Step Five: Create a Global Counterspace Command Structure

A global Counterspace command structure requires one commander who can focus on the global Counterspace fight for space superiority. A single, global commander can decide mission priorities and task forces through a unified or combined Space Superiority Tasking Order (SSTO). The SSTO would execute multiple realm's forces in support of one mission: space superiority, as opposed to an Air Tasking Order which tasks one realm's forces in support of multiple missions. This concept requires a modified approach to centralized control, decentralized execution—a basic tenet of air power.

Two factors make space superiority incompatible with the normal command structures of joint warfare. The first is the conflict between global assets and theater requirements. The United States military is usually simultaneously deployed in several different operations. Peacekeeping operations in one theater can easily coexist with counter-terrorism missions in a second theater. A United States ally in Theater A may jointly own and operate a space asset with a United States adversary in Theater B. One theater commander's Offensive Counterspace weapon system may be another theater commander's Defensive Counterspace target. While a theater commander can best assess the threat within his area of responsibility and articulate his need for Counterspace operations, the actual Counterspace operations will likely take place inside and outside his area of responsibility. Counterspace operations take place where the target segments

are, not necessarily where the beneficiary is. One global authority can best address deconfliction.

The second factor at play is the Counterspace forces used to conduct Counterspace operations. There are two keys to understanding the forces evolved in Counterspace operations. First, there are Counterspace-specific forces, both offensive and defensive, that carry out only Counterspace operations. Second, there are Counterspace support forces that carry out Counterspace operations as one of many missions. It is important to keep these forces separated.

In the first category are Counterspace forces, be they land, sea, air, or space assets, whose designed purpose is Counterspace operations. Air Force Space Command's proposed laser blinder is one example. These forces could be used to support multiple theaters simultaneously. It would be counterproductive to assign them to one theater commander. They need to be located, not in a commander's area of responsibility, but rather where they can accomplish the mission most effectively. This is similar to how Force Enhancement and Space Support assets are treated. Today, United States Space Command retains control of all Force Enhancement and Space Support assets.¹² The Commander-in Chief, United States Space Command has authority to deconflict Force Enhancement requirements from all theaters. He tasks and assigns space assets from a global perspective. For Counterspace operations, the Commander-in Chief, United States Space Command is equally well situated to deconflict space superiority requirements and Counterspace operations. This is the concept of centralized execution. It doesn't work well for air power, but is essential for Counterspace-specific forces.

¹² Dept of the AF, Basic Doctrine, 70.

In the second category are other land, sea, air, space, and special operations forces employed to attack or defend space power segments. Counterspace is a mission, not a realm of operations and it is not a uniquely space mission. Space systems have terrestrial components, space components, and a link to tie them together, and military power can be applied against any segment wherever and however needed. During the Gulf War, Army Special Forces conducted attacks on Iraqi radar sites in support of the air superiority campaign.¹³ In the case of space superiority, Army Special Forces could take down a space ground station; the Navy could destroy a sea-based launch platform. Theater commanders should retain responsibility for executing Counterspace operations conducted in their theaters, even if those operations are in support of another theater commander's Counterspace requirements. This supports the concept of decentralized execution.

To continue with the model of air power between the World Wars, the Aviation Board, chaired by former Secretary of War Newton Baker led to the creation of the General Headquarters (GHQ) Air Force in 1934. It contained all combat aircraft, not all aircraft, but all combat aircraft, and was the warfighting arm for Army air forces.¹⁴ This was an important step toward institutionalizing air power in the Army as it separated the fighting air forces from the other combat arms, gave them a general officer commander, and provided a defined force to call upon to meet the Nation's warfighting needs. GHQ Air Force not only enhanced mission accomplishment, it helped establish a service

¹³ Richard P. Hallion, *Storm over Iraq: Air Power and the Gulf War*, (Washington DC: Smithsonian Institution Press, 1992) 117.

¹⁴ Lt Col Mark A. Clodfelter, "Molding Airpower Convictions: Development and Legacy of William Mitchell's Strategic Thought," in *The Paths of Heaven*, ed. Melinger, (Maxwell AFB AL: Air University Press, 1997) 105, 106.

identity and a service culture. The same is true for a global Counterspace command structure and it would greatly enhance the institutionalization of space superiority.

Those are the five steps needed to institutionalize space superiority. 1) Develop operational Counterspace doctrine. 2) Realign space mission areas to bring Counterspace to the forefront. 3) Change roles and organizational missions in Air Force Space Command to support the first two steps. 4) Inculcate the global view of space superiority. And 5) Create a global Counterspace command structure. Following them will produce an Air Force with an established, clearly identifiable space superiority mission with formal, discernible organizational structures that standardize practices and approaches, and codify officially sanctioned beliefs. The result will be space superiority woven into the fabric of the Air Force. That is the essence of how to institutionalize space superiority in the United States Air Force.